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rotary drive unit relative to each other during rotation of the tape winding portion and the rotary drive unit, and

wherein power transmission of the power transmission means is from a frictional force caused by a thrust load between the tape winding portion and the rotary drive unit, and is connected and disconnected by a difference in torque therebetween, the thrust load, which causes the frictional force, is set by predetermined relational dimensions of the tape winding portion and the rotary drive unit in the axial direction between the tape winding portion and the rotary drive unit.

REMARKS

Claims 1-14 are pending. By this Amendment, claims 1, 9, and 12 are amended.

No new matter is presented.

Applicants respectfully note that the subject matter recited by pending Claims 1-14 of this application is directed to the embodiment in which the clutch mechanism of embodiments 1-3 is omitted and the driven member 21 and drive side rotary gear 20 are directly engaged with each other, i.e., there is no friction member or slip ring present between the two as is specifically taught by the Ono et al. (Ono) reference. See page 31, lines 12-16 of this application.

35 U.S.C. '112, second paragraph

The Office Action rejects Claims 1-14 under 35 U.S.C. '112, second paragraph.

Applicants respectfully traverse this rejection.

The Office Action alleges that Claims 1, 9, and 12 each contain the language "a tape winding portion" and that it is unclear how the tape winding portion and reels are inter related. Referring to Fig. 8, which coincidentally, is a drawing figure not related to the subject matter of this application, the Office Action notes reference number 12 represents the tape winding portion and that reference number 12 also contains the feed reel 21. Thus, the Office Action concludes it is not clear if the "tape winding portion" is merely another way of saying the feed reel or is a completely separate part of the invention.

Applicants have reviewed the originally-filed detailed disclosure of this application and strenuously disagree with the Office Action's apparent confusion. Specifically, page 16, lines 19-20 of this application states "... and the driven member 21 which is the tape winding portion 21 ..." (emphasis added). Furthermore, Figs. 10-15 of this application show the tape winding portion 12 as being composed of reference numbers 21 and 45, which represent the above-described driven member 21 and feed reel drum 45. Moreover, page 21, lines 11-15 of this application states "The drum 45 of the feed reel 10 is detachably engaged and supported on the driven member 21 through ... tooth profile engaging portions 45a, 21a, and are hence integrated with the driven member 21 ... to form the tape winding portion 12." (emphasis added).

As such, the Office Action's stated reason for the recited term "tape winding portion" being indefinite is incorrect. In fact, Applicants respectfully argue that the claims are highly specific and encompass a clear and specific scope of protection given

the description and illustrations of the recited term. Furthermore, each and every word of the "tape winding portion" feature recited by the presently pending claims uses the plain and well known meaning of each word. Put simply, there is no basis for the Office Action's allegation that "tape winding portion" term is indefinite such that one of ordinary skill in the art would have to speculate and/or make any assumptions as to the scope of the claims or not give the terms their "plain meaning." This is true especially in light of the fact that the term is clearly described by the specification in conjunction with the drawing figures applicable to the invention recited by the presently pending claims of this application. Also, the recited term is used such that one of ordinary skill in the art would not interpret it differently, especially given the detailed description provided in the originally-filed specification and the accompanying drawing figures filed therewith.

Accordingly, Applicants respectfully, but strongly, disagree with the allegations on which the § 112 rejection is based. As such, withdrawal of this rejection is respectfully requested.

35 U.S.C. '102(b)

A. Tucker

The Office Action rejects Claims 1-2 and 8 under 35 U.S.C. '102(b) as being anticipated by U.S. Patent 5,310,445 to Tucker. Applicants respectfully traverse this rejection.

The Office Action states Tucker teaches applicant's claimed invention of a clutch mechanism for a film transfer tool having a feed reel and a take-up reel rotatably provided in a hand-held case with the two reels being synchronized. The Office Action refers to column 2, lines 56-57 and 60-66.

Power transmission means between the tape winding portion for winding-up the coat film and a rotary drive unit for rotating and driving the tape winding portion. The power transmission means being composed by frictionally and directly engaging with each other engaging portions formed in confronting axial end surfaces of the tape winding portion and the rotary drive unit. The Office Action refers to column 4, lines 22-29 and Fig. 9.

The power transmission means is from a frictional force caused by a thrust load between the tape winding portion and the rotary drive unit and is connected and disconnected by a difference in torque therebetween. The thrust load, which causes the frictional force, is set by predetermined relational dimensions of the tape winding portion and the rotary drive unit in the axial direction between the tape winding portion and the rotary drive unit.

B. Ono et al. (Ono)

The Office Action rejects Claims 9-14 under 35 U.S.C. '102(b) as being anticipated by U.S. Patent 5,430,904 to Ono et al. (Ono). Applicants respectfully traverse this rejection as well.

Applicants respectfully note that the Office Action appears to substantially repeat the rejections from now-abandoned parent application 08/726,175. As such, the basis for this rejection will not be repeated herein to avoid redundancy.

Applicants have reviewed Tucker and Ono and provide the following comments regarding the applied § 102 rejection.

Presently pending claims 1, 9, and 12, as amended herein, recite that there is no axial movement of the tape winding portion and the rotary drive unit relative to each other during rotation of the tape winding portion and the rotary drive unit. Applicants note that the advantage of the recited arrangement is smooth running is obtained in the use of the tool, elimination of any discomfort being felt by the hand of the user, and the decrease in production of noise by the tool while being used.

The same can not be said for Tucker. In Tucker, the engaging and disengaging abutting nodules and v-shaped indentations lead to an uneven and non-uniform contact, which may give rise to uneven transfer of the coat film transfer tape. This also leads to the increased noise over the current invention. Thus engaging and disengaging of the abutting nodules becomes more frequent as the tape is wound from the feed rotary unit to the take up rotary unit and the rotational speed of the feed rotary unit increases. This means that the discomfort felt by the user becomes more apparent, and increasingly uneven transfer of the coat film transfer tape occurs.

Furthermore, a key feature of the invention recited by the presently pending claims of this application is in the structure of the clutch mechanism for synchronizing a feed speed and take-up speed of the cast film transfer tape in a feed reel and take-up reel. The clutch mechanism comprises at least one of the feed and take-up reels, and power transmission means which is provided between a tape winding portion for winding up the cast film transfer tape and a rotary drive unit for rotating and driving the tape winding portion. The power transmission means frictionally and directly engages each engaging portion formed in confronting axial end surfaces of the tape winding portion and the rotary drive unit, wherein no movement occurs in the axial direction between the tape winding portion and rotary drive unit relative to each other during rotation of the tape winding portion and the rotary drive unit.

The power transmission of the power transmission means derives from a frictional force caused by a thrust load between the tape winding portion and the rotary drive unit, and is connected and disconnected by a difference in torque therebetween. The thrust load is set by predetermined relational dimensions of the tape winding portion and the rotary drive unit in the axial direction between the tape winding portion and the rotary drive unit.

Tucker

Tucker discloses a coat film transfer tool having a clutch mechanism for synchronizing the feed speed and take-up speed of the coat film transfer tape T in a feed reel 22 and a take-up reel 27. The clutch mechanism functions as power transmission means between a tape winding portion 22 and a rotary drive unit 20, and is composed in the feed reel side. Power transmission of the power transmission means makes use of the engaging force of by the thrust load between the tape winding portion 22 and the rotary drive unit 20 and is connected and disconnected by the difference in torque between these two member, as well as the, present invention.

However, applicants respectfully submit that the structure of the Tucker power transmission means is different from that of the invention recited by the presently pending claims of this application.

In particular, the power transmission means of Tucker requires engaging each of the engaging portions 30, 45 formed in the confronting axial end surfaces of the tape winding portion 22 and the rotary drive unit 20. However, as shown Figures 2, 6-7, and 9, engagement of these engaging portions 30, 45 is not a result of continuous frictional engagement such as is in the present invention, but rather is intermittent and uneven, or rough, engagement by abutting nodules 30 and v-shaped indentations 45.

Therefore, applicants respectfully submit that the clutch mechanism of Tucker suffers from the same drawbacks as in the prior art disclosed in the description of this application. See Figure 21.

Furthermore, the engaging and disengaging action of the abutting nodules 30 and v-shaped indentations 45 of the Tucker clutch mechanism is intermittently repeated elastically with a clicking sound due to the uneven and discontinuous contact by elastic biasing force of the helical spring 48, so that the hand of the user may feel discomfort, and running of the coat film transfer tape T may be uneven. And, as use of the Tucker device is continued further, the engaging and disengaging action becomes more frequent as the revolution speed of the tape feed core increases, and the discomfort and uneven running become more pronounced.

On the contrary, in the clutch mechanism 88 recited by the presently pending claims of this application, since a first engaging portion 89 and a second engaging portion 90 are continuously and frictionally engaged directly, both the engaging portions 89, 90 smoothly slide while maintaining the existing constant or continuous contact. Therefore, in the clutch mechanism of the present invention, the manipulating hand of the user may not feel discomfort and running of the coat film transfer tape may be even, which is different from the clutch mechanism of Tucker.

Therefore, applicants respectfully submit that the clutch mechanism of this application and the device disclosed by Tucker are clearly different from each other. Furthermore, Tucker fails to teach, suggest or describe the clutch mechanism of the present invention.

Incidentally, applicants note the clutch mechanism of Tucker comprises the helical spring 48 functioning as an elastically biasing member for maintaining engagement state of the engaging portions 30, 45, which results in the number of parts increasing and complication of the structure thereof, thereby increasing the cost of the Tucker device.

Ono et al.

Ono et al. discloses a coat film transfer tool having a clutch mechanism for synchronizing the feed speed and take-up speed of the coat film transfer tape 2 in a feed reel 7 and a take-up reel 9. The clutch mechanism functions as power transmission means between a tape winding portion 7 and a rotary drive unit 8. Power transmission of the power transmission means makes use of the engaging force by the thrust load between the tape winding portion 7 and the rotary drive unit 8 and is connected and disconnected by the difference in torque between these two member, as well as the present invention.

However, applicants respectfully submit that the structure of the Ono power transmission means is different from that recited by the presently pending claims of application.

In particular, while the power transmission means of Ono has a slip ring 10 formed of rubber as the frictional member, the power transmission means further has a coil spring 11 for maintaining frictional engaging state of the slip ring 10 and opposed surface of the rotary drive unit 8. Accordingly, the number of necessary parts is

increased which further complicates the structure of the Ono device, thereby increasing the cost as well.

On the contrary, in the clutch mechanism 88 of this invention, the first engaging portion 89 and a second engaging portion 90 are continuously and frictionally engaged directly. Also, as compared with Ono, the number of parts is decreased and the structure is simplified, hence the device cost may be also decreased. Applicants note that the benefit of decreased cost in the clutch mechanism of this application is critical in the relevant art as coat film transfer tools are generally low-priced products to begin with.

Therefore, the structure of the clutch mechanism of the present invention and that of Ono are clearly different from each other. As such, applicants respectfully submit that Ono fails to teach, suggest or disclose the clutch mechanism of the present invention.

To qualify as prior art under 35 U.S.C. § 102, a single reference must teach, i.e., identically describe, each feature of a rejected claim. For the reasons discussed above, applicants respectfully submit that neither Tucker or Ono, alone or in combination, fail to teach, suggest or disclose each and every feature of rejected claims 1-2 and 8-14. As such, neither Tucker or Ono anticipate or render obvious, claims 1-2 and 8-14 of this application. Accordingly, claims 1-2 and 8-14 are deemed allowable and withdrawal of both § 102 rejections is respectfully requested.

35 U.S.C. '103(a)

Tucker in view of Ono

The Office Action then rejects Claims 3-7 under 35 U.S.C. '103(a) as being unpatentable over Tucker in view of Ono. Applicants respectfully traverse this rejection.

Claims 3-7 depend from allowable base claim 1. It is respectfully submitted these five dependent claims are allowable over the alleged Tucker/Ono combination for the same reasons claim 1 is allowable, as well as for the additional subject matter recited therein. As such, withdrawal of this rejection is respectfully requested.

In view of the foregoing, reconsideration of the application, withdrawal of the outstanding rejections, allowance of claims 1-14, and the prompt issuance of a Notice of Allowability are respectfully solicited.

Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone listed below.

In the event this paper is not considered to be timely filed, the Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300.

Respectfully submitted,
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Enclosures: Petition for Extension of Time
Check No. 318720
Version of Marked Up Claims as Amended
Request for Approval of Drawing Corrections
Amended Drawing Figures 21-22

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Version of Marked Up Claims as Amended

1. (Amended) A clutch mechanism of coat film transfer tool comprising:
a feed reel with a coat film transfer tape wound thereabout and a take-up reel for collecting the coat film transfer tape after use, the feed reel and take-up reel rotatably provided in a case that is held and manipulated by one hand, the take-up reel cooperates with the feed reel in the case to synchronize a feed speed and take-up speed of the coat film transfer tape in both reels,

power transmission means is provided between a tape winding portion for winding up the coat film transfer tape and a rotary drive unit for rotating and driving the tape winding portion, the power transmission means is composed in at least one of the feed and take-up reels, and is composed by frictionally and directly engaging with each other engaging portions formed in confronting axial end surfaces of the tape winding portion and the rotary drive unit, and wherein there is no axial movement of the tape winding portion and the rotary drive unit relative to each other during rotation of the tape winding portion and the rotary drive unit, and

wherein power transmission of the power transmission means is from a frictional force caused by a thrust load between the tape winding portion and the rotary drive unit, and is connected and disconnected by a difference in torque therebetween, the thrust load, which causes the frictional force, is set by predetermined relational dimensions of the tape winding portion and the rotary drive unit in the axial direction between the tape winding portion and the rotary drive unit.

9. (Amended) A coat film transfer tool using a coat film transfer tape of disposable type, comprising:

a case having shape and dimensions to be held and manipulated by one hand,

a feed reel rotatably provided in the case and winding a coat film transfer tape,

a take-up reel rotatably provided in the case and collecting the coat film transfer tape after use,

an interlock means for linking said feed and take-up reels so as to cooperate with each other, and

a coat film transfer head protruding at a front end of the case and pressing the coat film transfer tape onto an object of transfer,

a clutch means for synchronizing, at least in one of the feed and take-up reels, a feed speed and take-up speed of the coat film transfer tape between the feed and take-up reels,

wherein the clutch means composes, at least in one of the feed and take-up reels, power transmission means provided between a tape winding portion for winding up the coat film transfer tape and a rotary drive unit for rotating and driving the tape winding portion, and is composed by frictionally engaging with each other engaging portions formed in confronting axial end surfaces of the tape winding portion and the rotary drive unit, and wherein there is no axial movement of the tape winding portion and the rotary drive unit relative to each other during rotation of the tape winding portion and the rotary drive unit, and

wherein power transmission of the power transmission means is from a frictional force caused by a thrust load between the tape winding portion and the rotary drive unit, and is connected and disconnected by a difference in torque therebetween, the thrust load, which causes the frictional force, is set by predetermined relational dimensions of the tape winding portion and the rotary drive unit in the axial direction between the tape winding portion and the rotary drive unit.

12. (Amended) A coat film transfer tool using a coat film transfer tape of refill type, comprising:

- a case having shape and dimensions to be held and manipulated by one hand,

- a feed rotary unit rotatably provided in the case,

- a take-up rotary unit rotatably provided in the case,

- an interlock means for linking the feed and take-up rotary units so as to cooperate with each other,

- a tape cartridge having a feed reel and a take-up reel engaged detachably and rotatably with both the feed and take-up rotary units respectively, and

- a coat film transfer head protruding at a front end of the case and pressing the coat film transfer tape onto an object of transfer,

- a clutch means for synchronizing, in at least one of the feed and take-up rotary units, a feed speed and take-up speed of the coat film transfer tape in the feed and take-up rotary units,

wherein the clutch means composes, at least in one of the feed and take-up rotary units, power transmission means provided between a tape winding portion for winding up the coat film transfer tape and a rotary drive unit for rotating and driving the tape winding portion, and is composed by frictionally engaging with each other engaging portions formed in confronting axial end surfaces of the tape winding portion and the rotary drive unit, and wherein there is no axial movement of the tape winding portion and the rotary drive unit relative to each other during rotation of the tape winding portion and the rotary drive unit, and

wherein power transmission of the power transmission means is from a frictional force caused by a thrust load between the tape winding portion and the rotary drive unit, and is connected and disconnected by a difference in torque therebetween, the thrust load, which causes the frictional force, is set by predetermined relational dimensions of the tape winding portion and the rotary drive unit in the axial direction between the tape winding portion and the rotary drive unit.